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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,087	11/19/2003	Erwin M.J. Platvoet	ABBLUM/264/US	7018

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EXAMINER	
PRICE, CARL D	
ART UNIT	**PAPER NUMBER**
3749	

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,087	PLATVOET ET AL.	
	Examiner	Art Unit	
	CARL D. PRICE	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 10/19/2005.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 recites the limitation "the stoichiometric quantity of fuel" in the second to the last line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply

when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7: Rejected under 35 U.S.C. 103(a)

Claims **1-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **US003240204 (Von Wiesenthal) (of record)** in view of **US005823769 (Joshi et al)**.

Regarding claims **1-7**, the recitation "for the pyrolysis of hydrocarbons in the production of olefins" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able

to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Regarding claims 1-7 the recitations "for the pyrolysis of hydrocarbons in the production of olefins" and "for processing the hydrocarbons" is deemed a recitation of the intended use which does not result in a structural difference between the claimed invention and the prior art. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

US003240204 (Von Wiesenthal) shows and discloses an apparatus and method of operating a pyrolysis heater wherein:

- a radiant heating zone having a bottom hearth and opposing walls;
- at least one tubular heating coil between the opposing walls;
- a plurality of hearth burners (47; lower) located on the hearth adjacent to each of the walls and directed upwardly for firing flame envelopes vertically up along the walls through the radiant heating zone; and
- a plurality of upper wall fuel gas tips (47; upper) located on the walls above the hearth burners for injecting fuel gas upwardly between the walls and the flame envelopes.

US003240204 (Von Wiesenthal) shows and discloses the invention substantially as set forth in the claims with possible exception to:

- the method comprising the steps of firing the plurality of hearth burners with the combustion air and with less than the stoichiometric amount of fuel gas and injecting additional fuel gas into the radiant heating zone through the wall stabilizing fuel gas tips to thereby provide the stoichiometric quantity of fuel and thereby stage the combustion and prevent flame rollover.

US005823769 (Joshi et al) teaches, form applicant's same combustion flame forming field of endeavor, providing a the method (see column 2, lines 26-35) comprising the steps of firing the plurality of burners (25) with the combustion air and with less than the stoichiometric amount of fuel gas and injecting additional fuel gas into the radiant heating zone through the wall stabilizing fuel gas tips (20) to thereby provide the stoichiometric quantity of fuel and thereby stage the combustion and prevent flame rollover by forming a continuous elongated and luminous flame extending along and parallel to the material heated (i.e. – "provides a flame with increased fame luminosity and coverage above the melt surface"; see column 6, lines 34-41).

In regard to claims **1-7**, for the purpose of forming a continuous elongated and luminous flame extending along and parallel to the wall to be heated, it would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the burners lower and upper burners of **US003240204 (Von Wiesenthal)** to provide firing the plurality of the lower burners with combustion air with less than the stoichiometric amount of fuel gas (i.e. – fuel-lean) and injecting additional fuel gas into the radiant heating zone through the upper wall fuel gas tips to thereby provide the stoichiometric quantity of fuel, and thereby stage the

combustion and prevent flame rollover by forming a continuous elongated and luminous flame extending along and parallel to the material heated, in view of the teaching of **US005823769 (Joshi et al).**

In regard to claims **2, 3, 4, 6** and **7,** since the 1) stoichiometric quantity of fuel gas in a given burner, and 2) the relative locations of various burner components (e.g. – main fuel and after burn fuel) would necessarily depend on a variety of design concerns and/or parameters, such as the over all shape and size of the apparatus, availability and cost of materials, the type and amount of fuel used, etc., to form **US00r1** in accordance with the limitations set forth in these claims can be viewed as nothing more that merely matters of choice in design, absent the showing of any new or unexpected results produced therefrom over the prior art of record.

Conclusion

See the attached USPTO form 892 for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CARL D. PRICE
Primary Examiner
Art Unit 3749

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